

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB2004/002980

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01T1/24		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 G01T		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X  Y A	WO 02/063339 A (CARIA MARIO RAIMONDO ; SMITH KENWAY MONTGOMERY (GB); UNIV GLASGOW (GB)) 15 August 2002 (2002-08-15) the whole document  ----- -/-	9-19,23, 24,26, 31-33  21,22 1-8,25, 27-30
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search  12 January 2005		Date of mailing of the international search report  27. 01. 2005
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Coda, R

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Int:      nal Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SCHWARZ C ET AL: "Measurements with Si and GaAs pixel detectors bonded to photon counting readout chips" NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH, SECTION - A: ACCELERATORS, SPECTROMETERS, DETECTORS AND ASSOCIATED EQUIPMENT, NORTH-HOLLAND PUBLISHING COMPANY, AMSTERDAM, NL, vol. 466, no. 1, 21 June 2001 (2001-06-21), pages 87-94, XP004251280 ISSN: 0168-9002 page 87, paragraph 1 - page 88, paragraph 3	9,10, 13-16, 18-20, 23,24, 26,31
A		1-8,25, 27-30
X	----- US 5 812 191 A (SARAKINOS MILTIADIS EVANGELOS ET AL) 22 September 1998 (1998-09-22) column 2, line 27 - column 6, line 19 column 11, line 15 - column 12, line 26 column 14, line 35 - column 15, line 17 figures 1,2,8,10	23
Y		21,22
A	----- EISEN Y: "Current state-of-the-art industrial and research applications using room-temperature CdTe and CdZnTe solid state detectors" NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH, SECTION - A: ACCELERATORS, SPECTROMETERS, DETECTORS AND ASSOCIATED EQUIPMENT, NORTH-HOLLAND PUBLISHING COMPANY, AMSTERDAM, NL, vol. 380, no. 1-2, 1 October 1996 (1996-10-01), pages 431-439, XP004206359 ISSN: 0168-9002 the whole document	1-8, 27-33
X	----- US 2003/069002 A1 (HUNTER CHARLES ERIC ET AL) 10 April 2003 (2003-04-10) the whole document	34-52
X	----- US 5 986 276 A (LABRIOLA II DONALD P) 16 November 1999 (1999-11-16) column 2, line 66 - column 3, line 5 column 4, line 27 - column 5, line 67 ----- -/-	34-36, 46,47

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 6 100 806 A (GAUKEL JOHN J) 8 August 2000 (2000-08-08)</p> <p>column 5, line 56 - column 6, line 47 column 7, line 20 - column 9, line 32 column 11, line 13 - column 14, line 59 column 19, line 59 - column 20, line 44</p> <p>-----</p>	<p>34, 37-42, 44,45</p>

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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

As a result of the prior review under R. 40.2(e) PCT,  
no additional fees are to be refunded.

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-33

An assembly and a method for monitoring ionising radiation having: a detector substrate for generating electronic charge in response to incident ionising radiation, the detector having an array of sense volumes; a circuit substrate supporting readout circuits corresponding to the sense volumes, each circuit being switchable between two charge integration modes, the first one arranged to sense a single ionising radiation event and the second one arranged to sense a plurality of ionising radiation events. Moreover the circuits have a photon counting circuitry responsive to events having first and second energy range.

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2. claims: 34-52

A system and a method for remote monitoring of ionising radiation having at least one monitoring device including a communication unit for communicating the radiation data over a communication network and a control station to receive this radiation data. A possible hazardous radiation is detected by analysing the radiation spectroscopic data.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 02063339 A	15-08-2002	EP 1358509 A1 WO 02063339 A1 JP 2004530864 T US 2004096031 A1	05-11-2003 15-08-2002 07-10-2004 20-05-2004
US 5812191 A	22-09-1998	GB 2289979 A GB 2289981 A GB 2289983 A ,B AT 172343 T AU 691926 B2 AU 2672095 A CA 2191100 A1 CN 1155955 A ,B DE 69505375 D1 DE 69505375 T2 DK 763302 T3 WO 9533332 A2 EP 0763302 A2 EP 0854643 A2 EP 0854644 A2 EP 0853427 A2 EP 0854639 A2 ES 2123991 T3 FI 964728 A GB 2289980 A HK 1014819 A1 IL 113921 A JP 10505469 T NO 965104 A NZ 287868 A US 2003164888 A1 US 6035013 A US 2001002844 A1 US 2002089595 A1	06-12-1995 06-12-1995 06-12-1995 15-10-1998 28-05-1998 21-12-1995 07-12-1995 30-07-1997 19-11-1998 08-04-1999 23-06-1999 07-12-1995 19-03-1997 22-07-1998 22-07-1998 15-07-1998 22-07-1998 16-01-1999 02-12-1996 06-12-1995 18-08-2000 15-04-1997 26-05-1998 03-02-1997 24-04-1997 04-09-2003 07-03-2000 07-06-2001 11-07-2002
US 2003069002 A1	10-04-2003	NONE	
US 5986276 A	16-11-1999	NONE	
US 6100806 A	08-08-2000	US 6072396 A WO 03060549 A1 US 6337665 B1	06-06-2000 24-07-2003 08-01-2002